Environmental Defense Fund
Pacific Institute
Sierra Club

September 12, 2011

Mr. Fethi Benjemaa
Department of Water Resources, Water Use Efficiency Branch

Re: Quantifying Agricultural Water Use Efficiency (Section 10608.64 of SBx7-7)

Mr. Fethi Benjemaa:

There are three common and fundamental definitions of agricultural water use efficiency:

- Hydraulic efficiency – the (net) portion of water consumed by plants compared to the amount that is applied or withdrawn,
- Crop production efficiency – how much crop is harvested per unit of applied or net water, and
- Economic efficiency – what is the value of the crop per unit of applied or net water.

It is the position of our organizations that the Department of Water Resources must, as part of its implementation of Section 10608.64 of SBx7-7, include all three of these definitions as core elements of its methodology for quantifying agricultural water use efficiency.

Materials presented at the August 31, 2011 A1 subcommittee meeting suggest that the assessment of efficiency, however, might be limited to the excessively narrow "hydraulic" definition of water use efficiency – i.e. a determination of how applied agricultural water, including effective precipitation, results in (1) crop production, (2) irrecoverable losses, and (3) return flows and other recoverable losses. While this assessment will provide valuable information, it is not sufficient as it fails to address crop production or economic efficiency – the very purposes of agriculture.

If implementation of Section 10608.64 is to provide useful information, it must include an assessment of the how crop outputs are determined by the input of water. The statute directly provides language for addressing crop types.[1] Such information would be immensely valuable not only to the public but also to the agricultural industry itself.

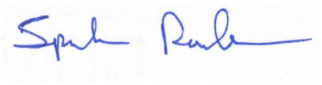
The comprehensive water legislation enacted in 2009 recognized that pressures on our limited water resources are increasing due to population, groundwater depletion, fragile levees and the

[1] 10608.64. The department, in consultation with the Agricultural Water Management Council, academic experts, and other stakeholders, shall develop a methodology for quantifying the efficiency of agricultural water use. Alternatives to be assessed shall include, but not be limited to, determination of efficiency levels based on crop type or irrigation system distribution uniformity. (emphasis added)

expectation of altered hydrology as a result of global warming. It is essential for future generations that water is used as efficiently as possible so that California can best support its world-class agricultural industry, growing urban centers, and precious natural resources. A comprehensive effort to effectively quantify agricultural water use efficiency is a critical step toward a more sustainable future for California. This opportunity should not be wasted.

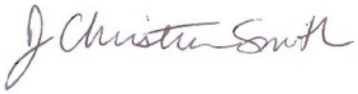
Thanks you for your consideration of these views. Please do not hesitate to contact us if you would like to discuss these matters further.

Sincerely,



Spreck Rosekrans
Environmental Defense Fund

Jim Metropulos
Sierra Club



Juliet Christian-Smith
Pacific Institute